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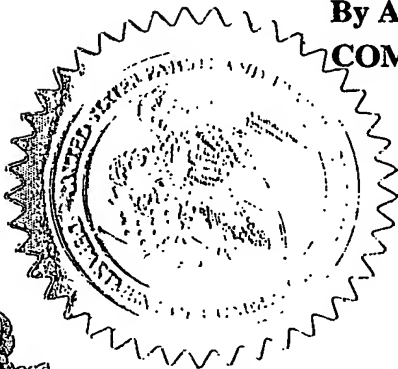
APPLICATION NUMBER: 60/500,020

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## PRIORITY DOCUMENT

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**PROVISIONAL APPLICATION FOR PATENT COVER SHEET**

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

Express Mail Label No. 16424 U.S. 160/5000806 09/05/03

INVENTOR(S)					
Given Name (first and middle (if any))	Family Name or Surname	Residence (City and either State or Foreign Country)			
PAUL	DUCLOS	Iles de la Madeleine, Canada			
Additional inventors are being named on the _____ separately numbered sheets attached hereto					
<b>TITLE OF THE INVENTION (500 characters max)</b>					
PENDULUM ACTUATED GEARING SYSTEM					
Direct all correspondence to: <b>CORRESPONDENCE ADDRESS</b>					
<input type="checkbox"/> Customer Number: <span style="border: 1px solid black; display: inline-block; width: 200px; height: 30px; vertical-align: middle;"></span>					
OR					
<input checked="" type="checkbox"/> Firm or Individual Name <b>INVENTARIUM</b>					
Address <b>4050, Rosemont blvd, suite 1607</b>					
Address _____					
City	Montreal	State	Quebec	Zip	H1X 1M4
Country	Canada	Telephone	514-376-1273	Fax	514-376-8611
<b>ENCLOSED APPLICATION PARTS (check all that apply)</b>					
<input checked="" type="checkbox"/> Specification Number of Pages <b>6</b>		<input type="checkbox"/> CD(s), Number _____			
<input checked="" type="checkbox"/> Drawing(s) Number of Sheets <b>2</b>		<input checked="" type="checkbox"/> Other (specify) <b>POSTCARD</b>			
<input type="checkbox"/> Application Date Sheet. See 37 CFR 1.76					
<b>METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT</b>					
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.				<div style="border: 1px solid black; padding: 10px; width: 100px; margin: 0 auto;">FILING FEE Amount (\$)  80.00\$</div>	
<input checked="" type="checkbox"/> A check or money order is enclosed to cover the filing fees.					
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<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.					
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.					
<input checked="" type="checkbox"/> No.					
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are: _____					

[Page 1 of 2]

Respectfully submitted,

Date **08-25-2003**

SIGNATURE

REGISTRATION NO. \_\_\_\_\_

TYPED OR PRINTED NAME **Paul Duclos**

(if appropriate)

Docket Number: \_\_\_\_\_

TELEPHONE **514-376-1273****USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT**

This collection of information is required by 37 CFR 1.51. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Provisional Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Provisional patent application of

Paul Duclos

for

**PENDULUM ACTUATED GEARING SYSTEM**

**BACKGROUND OF THE INVENTION :**

**Field of the invention :**

The invention relates generally to energy conversion and more particularly to a method of transferring a reciprocal movement into a rotational movement in order to actuate a device such as a generator.

**Background of the invention :**

Using the momentum of a pendulum as a way of producing work has been known for centuries. What has changed is the means for maintaining the pendulum swing as well as the means to convert a substantially linear movement into a movement more readily adaptable for producing useful work. Amongst the variety of prior art, some are more relevant to this instant invention:

An invention places the motive forces within the pendulum system itself, that alternately combine with gravity to produce a predetermined period of oscillation or vibration. The mechanism, attached above the axis, converts the electrical energy, supplied through the bearing, into alternately applied motive force, just sufficient to balance the internal pendulum losses. In some applications, additional force is supplied by this same mechanism to drive mechanically connected vibration registering gear assemblies.

An apparatus for harnessing the energy derived from the undulatory motion of a body of water includes a pendulum assembly having a buoyancy sufficient for maintaining it afloat in the water, a first structure substantially following multidirectional undulatory motions of the water and a second structure mounted in the assembly for free movement in a plurality of planes with respect to the first structure. The second structure is displaceable by gravity and by forces derived from the motions of said first structure. There is further provided a device connected to the first and second structures for generating a pressure output in response to the force derived from the relative motions between the first and second structures. An arrangement is coupled to the pressure output of the device for utilizing, at least indirectly, the energy derived from the pressure output.

An energy generator includes a pendulum suspended at one end and in operative relationship with an external power device which imparts oscillation movement to the pendulum. The pendulum includes a weight disposed at one end being in operative cooperation with a hydraulic fluid cylinder to increase the hydraulic pressure of the fluid within the cylinder. A power output device receives the high pressure hydraulic

fluid and generates output power. A second embodiment is directed to a power booster wherein energy is transferred between a pendulum and a power generating device.

A prime mover that stores mechanical energy in case of an electrical failure. When an electrical failure occurs, the prime mover is activated either automatically by a computer with a battery back-up or manually. The prime mover oscillates back and forth in a pendulum type fashion which in turn drives an electrical generator in order to produce electricity. The prime mover comprises a base, elements that are rotatably mounted to the base, a pick-up balance that is rotatably mounted to the base, and a drive train that operatively connects the prime mover to the electrical generator.

### **SUMMARY OF THE INVENTION**

The present invention discloses a novel way of translating a pendulum motion into a rotational motion and which, when combined with a gearing system, can achieve a velocity sufficient to drive a generator.

In order to do so, a pair of counterswinging pendulums actuate a wheel situated above their axis of oscillation. Once actuated, the wheel can be attached to a gearing system to increase the rotational speed and drive a generator to produce electrical power to charge batteries. Oscillation of the pendulum is maintained by a pair of electromagnets, one for each pendulum, which gives the pendulum the necessary push to maintain oscillation.

The foregoing and other objects, features, and advantages of this invention will become more readily apparent from the following detailed description of a preferred embodiment with reference to the accompanying drawings, wherein the preferred embodiment of the invention is shown and described, by way of examples. As will be realized, the invention is capable of other and different embodiments, and its several details are capable of modifications in various obvious respects, all without departing from the invention. Accordingly, the drawings and description are to be regarded as illustrative in nature, and not as restrictive.

#### **BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENT**

**Fig. 1** schematic representation of the entire system.

**Fig. 2** front elevation of the top part of the pendulums showing the transition means between oscillation and rotation.

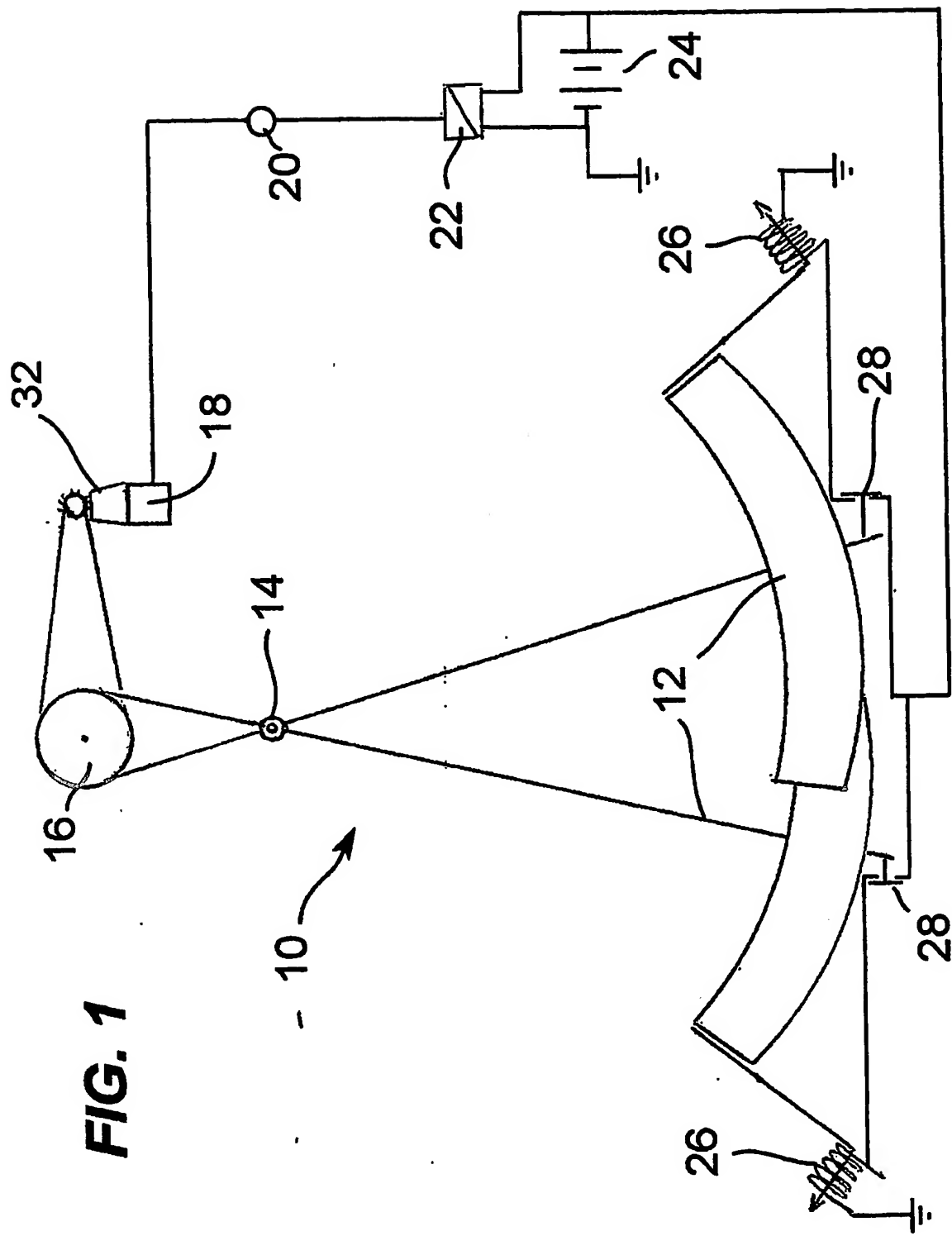
#### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

**FIG. 1** A pendulum actuated gearing system (10) has a pair of counterswinging pendulums (12) suspended from an oscillation axis (14). Continuing beyond the oscillation axis (14), the pendulums (12) actuate a main gear wheel (16). Once actuated, the main gear wheel (16) can be attached to a gearing system (32) to increase the rotational speed to drive a generator (18) that produces electrical power. That electrical power can be converted from AC to DC by a converter (20) and then go to batteries (24) by way of a regulator (22).

Oscillation of the pendulums (12) is maintained by a pair of electromagnets (26), one for each pendulum (12), which give them the necessary push to maintain oscillation. When a pendulum (12) reaches its uppermost position, it pushes on a switch (28) that cuts off power to the electromagnet (26) thus freeing itself from its attractive force so that it can continue its swing. A certain cutoff delay is maintained at the switch (28) so that the electromagnet (26) won't be immediately turned on again and impede the oscillation of the pendulum (12).

**FIG. 2** In order to efficiently convert the oscillating motion of the pendulums (12) into a rotational motion, the top of each pendulum (12) has an opening shaped like a spade (28) and inside the periphery of each spade (28) moves a peg (30). The spade shape is the most efficient shape into which a circular shape can be drawn from two swinging pendulums (12) as they interact with pegs (30) situated at the periphery of a circular object such as the main gear wheel (16). In this way, an oscillatory motion can be converted into a circular motion.

**FIG. 1**





**FIG. 2**

